

REMARKS

The current rejection is the *second* Non-Final Rejection in response to the Applicants filing of an Appeal Brief. The current rejection, as it stands, is a mere rearrangement of art previously applied in the Non-Final Rejection mailed May 03, 2007, and appealed August 06, 2007. The Examiner is reminded that the goal of examination is to clearly articulate any rejection *early* in the prosecution process so that Applicant has the opportunity to provide evidence of patentability and otherwise reply completely at the earliest opportunity. *See* M.P.E.P. § 706. Therefore, it is unclear why the Examiner is choosing to now present rejections, which could have easily been made in the prior Action. The current application has been before the Office for over *six years*, and the Examiner has now *twice* refused to allow Applicants to seek a resolution to the Examiner's misapplication of the references at the Board of Patent Appeals and Interferences, while the same references are applied time and again. The Examiner is reminded not to overlook their duty to *allow* claims under M.P.E.P. § 706.

In the Office Action, the Examiner rejected claims 1-9 and 11-23. This response neither amends nor cancels any claims. As such, claims 1-9 and 11-23 remain pending. Due to the Examiner's apparent unwillingness to allow Applicants to appeal the rejections of the current claims, Applicants request a conference with the Examiner and the Examiner's supervisor if the claims are not found to be allowable in their current form. Applicants respectfully request reconsideration of the pending claims in view of the following remarks.

Claim Rejection Under 35 U.S.C. § 112, First Paragraph

In the Office Action, the Examiner rejected claims 1, 9, and 13 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. In particular, the Examiner stated:

As per claims 1, 9, 13, it states “...to redirect without arbitration the data received from the OS to the remote user”. Nowhere in the specification does it state “to redirect without arbitration”. Therefore the claim language is not supported by the specification.

Office Action, page 2.

Applicants respectfully traverse this rejection. Regarding the written description requirement, the initial burden of proof regarding the sufficiency of the written description falls on the Examiner. Accordingly, the Examiner must present evidence or reasons why persons skilled in the art would not recognize a description of the claimed subject matter in Applicants disclosure. *In re Wertheim*, 541 F.2d 257, 262, 191 U.S.P.Q. 90, 96 (CCPA 1976). The Examiner is also reminded that the written description requirement does not require the claims to recite the same terminology used in the disclosure. The patentee may be his own lexicographer. *Ellipse Corp. v. Ford Motor Co.*, 171 U.S.P.Q. 513 (7th Cir. 1971), *aff’d*, 613 F.2d 775 (7th Cir. 1979), *cert. denied*, 446 U.S. 939 (1980).

Independent claims 1, 9 and 13 recite a method and system in which a remote server management controller employs a virtual communication device (VCD) interface that is adapted to intercept data received from an operating system (OS). The virtual communication device (VCD) is further adapted to “redirect without arbitration the data received from the OS to the remote user via the external communication interface instead of redirecting the data received from the OS to the specific communication interface.”

Applicants note that the specification clearly states that data intercepted through the VCD may be “redirected to other outputs of the remote server management controller 200. For example, data intercepted by the VCD may be redirected to a remote user via the Ethernet interface 322.” Specification, page 21, lines 19-22. As further disclosed in the specification:

[T]he VCD 600 or USB interface 326 passes the user’s request to the OS via the OS-supported management facility at 808 and receives the response back from the OS. The VCD 600 or USB interface 326 passes the response of the OS back to the IOP 302 at 810 and the IOP 302 transmits the response back to the user via the Ethernet interface 322 at 812.

Specification, page 29, line 22 - page 30, line 4.

Hence, redirection of data by the VCD is done with no intervening or intermediate steps, such as those implemented by an arbitrator. Further, there is nothing in Applicants’ disclosure to suggest that redirection of data by the VCD is done with arbitration. Therefore, it is unforeseeable that one skilled in the art having the benefit of the Applicants disclosure would conclude that redirection of data is done with arbitration.

Moreover, the recited limitation “without arbitration” is a negative limitation and as such does not require literal basis in the specification. As clearly stated by the M.P.E.P.:

[A] lack of literal basis in the specification for a negative limitation may not be sufficient to establish a *prima facie* case for lack of descriptive support. *Ex parte Parks*, 30 USPQ2d 1234, 1236 (Bd. Pat. App. & Inter. 1993).

M.P.E.P. § 2173.05(i).

In the present case, Applicants respectfully assert that the fact that the specification does not *literally* contain the claim recitation “without arbitration” is not an indication that

one of ordinary skill in the art would be required to engage in undue experimentation to conclude that data redirection is performed without the unmentioned act of arbitration, especially when the specification clearly describes that the redirection may be accomplished with no intermediary steps. Indeed, the lack of discussion of arbitration in the specification supports Applicants contention that arbitration was not contemplated as a part of the redirection of data in accordance with Applicants invention. Accordingly, Applicants respectfully request the Board to reverse the rejection of claims 1, 9 and 13 under 35 U.S.C. § 112, first paragraph.

Claim Rejections under 35 U.S.C. § 103(a)

In the Office Action, the Examiner rejected claims 1-9 and 11-23 under 35 U.S.C. § 103(a) as unpatentable over Vachon et al., U.S. Publication No. 2002/0078404 (hereinafter “the Vachon reference”), in view of Ito et al., U.S. Patent No. 6,963,817 (hereinafter “the Ito reference”). Specifically, with regard to independent claims 1, 9, and 13, the Examiner stated, in relevant part:

Claim 1

As per claim 1, Vachon teaches a remote management controller, comprising:

- an external communication interface (Fig. 1 element 106) adapted to receive from a remote user (Fig. 5 element "target computer") (Paragraph 33);

Vachon teaches serial bus such as IEEE 1394 serial bus adapted to receive data from target computer

- an input/output processor (IOP) adapted to: receive data from external communication interface (Paragraph 33);

and

Vachon teaches host computer receives data from the serial bus of the content of the target computer.

- transmit data corresponding to the data received from the external communication interface to an operating

system (0s) of a managed server (Paragraph 36) (Paragraph 38); and

Vachon teaches sending the data via serial bus interface the data received from the target computer to the host computer and the debugger run by the operating system.

Vachon is silent in teaching a virtual communication device (VCD) interface adapted to: intercept data received from the OS, the VCD interface comprising a predefined standard communication interface, the data received from the OS being intended for specific communication interface, and to redirect without arbitration the data received from the OS to the remote user via the external communication interface instead of redirecting the data received from the 6s to the specific communication interface.

Ito teaches a virtual communication device (VCD) (microprocessor) interface adapted to: intercept data received from the OS (column 12 lines 25-28), the VCD interface comprising a pre-defined standard communication interface, the data received from the OS being intended for specific communication interface (column 12 lines 62-67, lines 1-5), and to redirect without arbitration the data received from the OS to the remote user via the external communication interface instead of redirecting the data received from the OS to the specific communication interface (column 12 lines 6-12, lines 25-32)(Fig. 7)(Fig. 8).

Ito teaches microprocessor (virtual communication device) intercepting data from the operating system, the data may be sent to UART3 (specific communication interface), and is redirected to the remote computer via modem (external communication interface).

Therefore it would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to implement Ito's teaching in Vachon's teaching to come up with redirecting data to the remote user through modem and UART2 (external communication) instead of redirecting data to specific communication interface (i.e. UART3). The motivation for doing so would be so that the data can be stored remotely to have a back-up system and also security reasons (column 11 lines 43-45).

Office Action, pages 3-4.

Claim 9

As per claim 9, Vachon teaches a remote server management controller, comprising:

-an input/output processor (IOP) adapted to monitor interrupt data transmitted from a super I/O (SIO) to a southbridge, to alter the interrupt data transmitted from the SIO based on input received from an external user via an external communication interface (Paragraph 33) and to transmit the altered interrupt data to a managed server (Paragraph 36) (Paragraph 38); and

Vachon fails to teach a virtual communication device (VCD) that comprises a predefined standard communication interface, the VCD being adapted to: intercept responsive data intended to be transmitted to the SIO in response to the altered interrupt data; the responsive data being in a format that is not compatible with the first communication protocol; and prevent the responsive data from reaching the SIO; format the responsive data for transmission; and redirect without arbitration the formatted data to the external communication interface.

Ito teaches a virtual communication device (VCD) (Fig. 7 element 306 or Fig. 8 element 322) that comprises a predefined standard communication interface (UART interface), the VCD being adapted to: intercept responsive data intended to be transmitted to the SIO in response to the altered interrupt data (column 12 lines 62-67, lines 1-5); the responsive data being in a format that is not compatible with the first communication protocol; and prevent the responsive data from reaching the SIO; format the responsive data for transmission; and redirect without arbitration the formatted data to the external communication interface (column 12 lines 6-12, lines 25-32)(Fig. 7)(Fig. 8).

Therefore it would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to implement Ito's teaching in Vachon's teaching to come up with redirecting data to the remote user through modem instead of redirecting data to specific communication interface (i.e. UART). The motivation for doing so would be so that the data can be stored remotely to have a back-up system and also security reasons (column 11 lines 43-45).

Office Action, page 6-7.

Claim 13

As per claim 13, Vachon teaches a method of remotely retrieving data from an operating system (OS), the method comprising the acts of:

- receiving a request for OS information from a remote user (Paragraph 33) (Paragraph 35)(Paragraph 36);
- transmitting the request for OS information to the OS via a virtual communication device (VCD) comprising a pre-defined standard communication interface (Paragraph 36)(Paragraph 38); and

Vachon fails to teach receiving via the VCD interface data responsive to the act of transmitting the request to the OS, the data being intended for a specific communication interface; formatting the responsive data for transmission and; redirecting without arbitration the formatted data to the external communication interface

Ito teaches transmitting the request for OS information to the OS via a virtual communication device (VCD) comprising a pre-defined standard communication interface (column 10 lines 43-47, lines 64-67); receiving via the VCD interface data responsive to the act of transmitting the request to the OS, the data being intended for a specific communication interface (column 12 lines 62-67, lines 1-5), formatting the responsive data for transmission and; redirecting without arbitration the formatted data to the external communication interface (column 32 lines 6-12, lines 25-32) (Fig. 7) (Fig. 8).

Therefore it would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to implement Ito's teaching in Vachon's teaching to come up with redirecting data to the remote user through modem instead of redirecting data to specific communication interface (i.e. UART). The motivation for doing so would be so that the data can be stored remotely to have a back-up system and also security reasons (column 11 lines 43-45).

Office Action, page 8-9.

Applicants respectfully traverse these rejections. The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q.

735 (B.P.A.I. 1979). To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 180 U.S.P.Q. 580 (C.C.P.A. 1974). However, it is not enough to show that all the elements exist in the prior art since a claimed invention composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. *KSR International Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1741 (2007). It is important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. *Id.* Specifically, there must be some articulated reasoning with a rational underpinning to support a conclusion of obviousness; a conclusory statement will not suffice. *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006). Indeed, the factual inquiry determining whether to combine references must be thorough and searching, and it must be based on *objective evidence of record*. *In re Lee*, 61 U.S.P.Q.2d 1430, 1436 (Fed. Cir. 2002).

Omitted Features of claims 1 and 9

Independent claim 1 recites, *inter alia*, “A remote server management controller, comprising: an input/output processor (IOP) adapted to...transmit data corresponding to the data *received from the external communication interface to an operating system (OS) of a managed server*; and a virtual communication device (VCD) interface adapted to: *intercept data received from the OS...the data received from the OS being intended for a specific communication interface*, and to *redirect without arbitration* the data received from the OS to the remote user via the external communication interface instead of *redirecting* the data received from the OS to the specific communication interface.” (Emphasis added). Similarly, independent claim 9 recites, *inter alia*, “an input/output processor (IOP) adapted to...alter the

interrupt data transmitted from the SIO based on input received from an external user *via an external communication interface* and to transmit the altered interrupt data *to a managed server*; and a virtual communication device (VCD) that comprises a predefined standard communication interface, the VCD being adapted to *intercept* responsive data *intended to be transmitted* to the SIO in response to the altered interrupt data...and *redirect* without arbitration the formatted data to the external communication interface. (Emphasis added).

The Examiner cites the Vachon reference (paragraphs 36 and 38) as describing an input/output processor adapted to transmit data corresponding to the data received from the external communication interface to an operating system of a managed server. Paragraph 36 of the Vachon reference details the process of a system administrator taking a physical memory snapshot of a target computer by reading and storing the contents of the physical memory of the target computer into a dump file. Similarly, paragraph 38 of the Vachon reference details a process that enables kernel debugging of the physical memory snapshot. However, the cited paragraphs, as well as the remainder of the Vachon reference, fail to describe transmitting data corresponding to the data *received from the external communication interface to an operating system (OS) of a managed server*.

First, the Vashon reference only describes transmitting a snapshot of physical memory, which is not analogous to transmitting data *received from the external communication interface*. The data is clearly described as being located in the physical memory of the target computer, and does not correspond to the data *received from the external communication interface* memory, as recited in claim 1. Second, the snapshot data described in the Vachon reference is not transmitted *to an OS of a managed server*. Indeed, while the target computer may be

regarded as being “managed” due to the ability of the host computer being able to halt the execution of the target computer (*see* Vachon, paragraph 38), the only data described by the Vachon reference as being transferred to the host computer is a physical memory snapshot being transmitted to the *host*, not the target. *See id* at paragraph 36. Furthermore, there is no description of a data transfer to an *OS of a managed server*. Thus, the Vachon fails to describe the transmission of data corresponding to the data *received from the external communication interface to an operating system (OS) of a managed server*. Additionally, the Ito reference fails to remedy the aforementioned deficiencies of the Vachon reference.

Instead, the Examiner relies on the Ito reference to teach a virtual communication device interface adapted to *intercept* data received *from the OS*, the data received from the OS being *intended for a specific communication interface*, and to *redirect without arbitration* the data received from the OS to the remote user via the external communication interface instead of *redirecting* the data received from the OS to the specific communication interface. However, these teachings are simply not present in the Ito reference. The Ito reference describes a field instrument and system for obtaining pressure, flow, and temperature data from a facility and passing the data to either a remote or a local terminal. *See* Ito, Abstract. Indeed, the data is explicitly described as being forwarded to a local terminal computer or to a remote computer depending on the *mode of operation* of the operating system. *See* Ito, Col. 11, line 67 – Col. 12, line 10 and Col. 12, lines 18-29. Thus, the system described in the Ito reference is configured to transmit data to either a remote or a local computer based on the *mode of operation* of the operating system.

Because the transmission of data described in the Ito reference is described as based on the *mode of operation* of the operating system, it follows necessarily that when the OS is in a local mode, data is passed to the local computer, whereas when the OS is in remote mode, data is passed to the remote computer. In either case, the data is sent to the location as directed by the OS. Thus, aside from the fact that Applicants do not necessarily agree that the described microprocessor in the Ito reference is analogous to the VCD in claims 1 and 9, there is no description in the Ito reference of the VCD interface being adapted to *intercept data intended for a specific communication interface* and *redirecting* of that data, as recited in independent claims 1 and 9. For data to be intercepted and redirected, the data must be cut off from an intended destination and the destination of the data must be changed. Since the teachings of the ITO reference specifically describe transmitting data along a path *prescribed* by the OS, it can hardly be argued that the data transmission system described by the Ito reference intercepts data *intended for a specific communication interface* and *redirects* that data. Furthermore, as noted by the Examiner, the Vachon reference is silent as to the above claim recitations.

Accordingly, none of the cited references, taken alone or in hypothetical combination disclose all of the features of independent claims 1 and 9. Applicants therefore assert that claims 1 and 9, as well as all claims depending thereon, are allowable. Therefore, Applicants respectfully request withdrawal of the rejection of claims 1-9, 11, 12, 21, and 22.

Omitted Features of claim 13

Independent claim 13 recites, *inter alia*, “receiving a request for *OS information* from a remote user...transmitting the request *for OS information* to the OS via a virtual

communication device (VCD) interface...receiving, via the VCD interface, data responsive to the *act of transmitting the request* to the OS...and *redirecting* without arbitration the formatted data to the external communication.” (Emphasis added).

The Examiner cites the Vachon reference at paragraphs 36 and 38 as describing receiving a request for *OS information* from a remote user and receiving data responsive to the *act of transmitting the request* to the OS. As stated above, paragraph 36 of the Vachon reference merely details the process of a system administrator taking a physical memory snapshot of a target computer by reading and storing the contents of the physical memory of the target computer into a dump file, while paragraph 38 of the Vachon reference details a process that enables kernel debugging of the physical memory snapshot. The cited paragraphs, as well as the remainder of the Vachon reference, fail to describe receiving a request for *OS information* from a remote user and receiving data responsive to the *act of transmitting the request* to the OS.

Therefore, the Vashon reference only describes a process including transmitting a snapshot of physical memory. Even if this process may be generated by a received request, the request is for accessing the physical memory of a test computer. A request for accessing the physical memory of a test computer *is not* analogous to receiving a request for *OS information* from a remote user. Furthermore, the host computer *itself* reads the content of the target computer physical memory. Vachon, paragraph 36, lines 5-9. This cannot read on the claim language receiving data responsive to the *act of transmitting the request* to the OS, as recited in independent claim 13. There is no request by the host computer to the OS of the target computer, rather, the host computer *itself* reads the content of the target computer physical

memory. Thus, the Vachon fails to describe receiving and transmitting the request for *OS information* from a remote user to the OS via a virtual communication device (VCD) interface, as well as receiving, via the VCD interface, data responsive to the *act of transmitting the request* to the OS, as recited in independent claim 13. Additionally, the Ito reference fails to remedy the aforementioned deficiencies of the Vachon reference.

Instead, the Examiner relies on the Ito reference to teach *redirecting* without arbitration the formatted data to the external communication. However, as shown above, the teaching of *redirection* without arbitration the formatted data to the external communication is simply not present in the Ito reference. The system described in the Ito reference is configured to transmit data to either a remote or a local computer based on the *mode of operation* of the operating system. Because the transmission of data described in the Ito reference is described as based on the *mode of operation* of the operating system, *redirecting* of that data is not taught, since redirection requires that the destination of the data must be changed. Since the teachings of the ITO reference specifically describe transmitting data along a path *prescribed* by the OS, it can hardly be argued that the data transmission system described by the Ito *redirects* the transmitted data. Furthermore, as noted by the Examiner, the Vachon reference is silent as to the above claim recitation.

Accordingly, none of the cited references, taken alone or in hypothetical combination disclose all of the features of independent claim 13. Applicants therefore assert that claim 13, as well as all claims depending thereon, are allowable. Therefore, Applicants respectfully request withdrawal of the rejection of claims 13-20 and 23.

The Examiner further rejected claims 1-2, 4, 8, 9, 11-14, and 17-20 under 35 U.S.C. § 103(a) as unpatentable over Krontz et al., U.S. Patent No. 5,790,895 (hereinafter "the Krontz reference"), in view of the Ito reference. Specifically, with regard to independent claims 1, 9, and 13, the Examiner stated in relevant part:

Claim 1

As per claim 1, Krontz teaches a remote server management controller (Fig. 2 Element "Integrated Remote Console"), comprising:

- an external communication interface (Fig. 1A element 149) adapted to receive data from a remote user (column 9 lines 52-56);

The reference teaches the modem (external communication interface) receives serial data from remote computer and communicates the serial data to the UART.

- an input/output processor (IOP) adapted to:
 - receive data from external communication interface (column 9 lines 52-56) (column 10 lines 46-64); and

The reference teaches the input/output processor (IOP) receives data from the modem (external communication interface).

- transmit data corresponding to the data received from the external communication interface to an operating system (Os) of a managed server (column 10 lines 55-67) (column 11 lines 1-9, lines 26-45) (column 12 lines 17-36, 54-64); and

The reference teaches sending the resource data to the operating system of the server and the Virtual communication port of the device intercepts the data. The data is sent to the remote computer (remote user) via the modem (external communication port) to the operating system.

- a virtual communication device (VCD) (Fig. 2 element 200) interface adapted to (column 11 lines 40-44):

- intercept data received from the OS, the VCD interface comprising a pre-defined standard communication interface, the data received from the OS being intended for specific communication interface (column 10 lines 55-67)(column 11 lines 1-9, lines 26- 4 9 , and to redirect the data received from the OS to the remote user via the external communication interface instead of redirecting the

data received from the OS to the specific communication interface (column 10 lines 55- 7)(column 11 lines 1-9, lines 26- 45)(column 12 lines 17-36) (column 12 lines 49-67);

The reference teaches sending the resource data to the operating system of the server and the Virtual communication port of the device intercepts the data. The data is directly received by the operating system without the arbitrator and the data is directly to the remote computer (remote user) from the operating system via the modem (external communication port). The reference also teaches the virtual communication device comprises pre-defined standard communication interface as COM1 through COM4 (column 10 lines 55-67) (column 11 lines 1-9, lines 26-31).

Krontz does not explicitly show to redirect without arbitration the data received from the OS to the remote user via the external communication interface instead of redirecting the data received from the OS to the specific communication interface.

Ito teaches a virtual communication device (VCD) (microprocessor) interface adapted to: intercept data received from the OS (column 12 lines 25-28), the VCD interface comprising a pre-defined standard communication interface, the data received from the OS being intended for specific communication interface (column 12 lines 62-67, lines 1-5), and to redirect without arbitration the data received from the OS to the remote user via the external communication interface instead of redirecting the data received from the OS to the specific communication interface (column 12 lines 6-12, lines 25-32)(Fig. 7)(Fig. 8).

Ito teaches microprocessor (virtual communication device) intercepting data from the operating system, the data may be sent to UART3 (specific communication interface), and is redirected to the remote computer via modem (external communication interface).

Therefore it would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to implement Ito's teaching in Krontz's teaching to come up with redirecting data to the remote user through modem and UART2 (external communication) instead of redirecting data to specific communication interface (i.e. UART3). The motivation for doing so would be so that the data can be stored remotely to have a back-up system and also security reasons (column 11 lines 43-45).

Office Action, page 11-13.

Claim 9

As per claim 9, Krontz teaches a remote server management controller, comprising:

- an input/output processor (IOP) adapted to monitor interrupt data transmitted from a super 110 (SIO) to a southbridge (column 9 lines 25-34), to alter the interrupt data transmitted from the SIO based on input received from an external user via an external communication interface (column 12 lines 17-36, lines 54-64) and to transmit the altered interrupt data to a managed server (column 10 lines 47-64) (column 9 lines 25-56); and

- a virtual communication device (VCD) that comprises a predefined standard communication interface (column 10 lines 55-67) (column 11 lines 1-9, lines 26-31), the VCD being adapted to:

- intercept responsive data intended to be transmitted to the SIO in response to the altered interrupt data (column 10 lines 55-67)(column 11 lines 1-9, lines 26-45)(column 12 lines 17-36), the responsive data being in a format that is not compatible with the first communication protocol (column 12 lines 54-67); and

- prevent the responsive data from reaching the SIO (column 10 lines 26-43);

The reference teaches the virtual communication port (VCD) to intercept the accesses (data) and prevents it from reaching the SIO.

- format the responsive data for transmission (column 12 lines 54-63) (column 10 lines 47-64); and

The reference teaches remote computer senses that connection in regards to data has not been established and retransmits and redirects it again through the protocols (format the data) therefore gobbling of data changed therefore the data has been transmitted.

- redirect the formatted data to the external communication interface (column 12 lines 49-67).

The reference teaches redirect the data to the operating system and received by the operating system without the arbitrator and the data is formatted because the data in the packet has went through the analysis directly to the remote computer (remote user) from the operating system via the modem (external communication port).

It teaches a virtual communication device (VCD) (Fig. 7 element 306 or Fig. 8 element 322) that comprises a predefined standard communication interface (UART

interface), the VCD being adapted to: intercept responsive data intended to be transmitted to the St0 in response to the altered interrupt data (column 12 lines 62-67, lines 1-5); the responsive data being in a format that is not compatible with the first communication protocol; and prevent the responsive data from reaching the SIO; format the responsive data for transmission; and redirect without arbitration the formatted data to the external communication interface (column 12 lines 6-12, lines 25-32)(Fig. 7)(Fig. 8)

Therefore it would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to implement Ito's teaching in Vachon's teaching to come up with redirecting data to the remote user through modem instead of redirecting data to specific communication interface (i.e. UART). The motivation for doing so would be so that the data can be stored remotely to have a back-up system and also security reasons (column 11 lines 43-45).

Office Action, page 14-16.

Claim 13

As per claim 13, Krantz teaches a method of remotely retrieving data from an operating system (OS), the method comprising the acts of:

- receiving a request for OS information from a remote user (column 12 lines 17-36, lines 54-64);
- transmitting the request for OS information to the OS via a virtual communication device (VCD) comprising a pre-defined standard communication interface (column 10 lines 55-67) (column 11 lines 1-9, lines 26-45) (column 12 lines 54-64); and

The reference teaches sending the resource data to the operating system of the server and the Virtual communication port of the device intercepts the data. The data is sent to the remote computer (remote user) via the modem (external communication port) to the operating system.

- receiving via the VCD interface data responsive to the act of transmitting the request to the OS, the data being intended for a specific communication interface (column 10 lines 55-67)(column 11 lines 1-9, lines 26-45)(column 12 lines 17-36)(column 12 lines 54-67);

-formatting the responsive data for transmission
(column 12 lines 54-63); and

The reference teaches remote computer senses that connection in regards to data has not been established and retransmits and redirects it again through the protocols (format the data) therefore gobbling of data changed therefore the data has been transmitted.

-redirecting the formatted data to the external communication interface (column 12 lines 49-67).

The reference teaches redirect the data to the operating system and received by the operating system without the arbitrator and the data is formatted because the data in the packet has went through the analysis directly to the remote computer (remote user) from the operating system via the modem (external communication port).

Ito teaches transmitting the request for OS information to the OS via a virtual communication device (VCD) comprising a pre-defined standard communication interface (column 10 lines 43-47, lines 64-67); receiving via the VCD interface data responsive to the act of transmitting the request to the OS, the data being intended for a specific communication interface (column 12 lines 62-67, lines 1-5), formatting the responsive data for transmission and; redirecting without arbitration the formatted data to the external communication interface (column 12 lines 6-12, lines 25-32)(Fig. 7)(Fig. 8)

Therefore it would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to implement Ito's teaching in Vachon's teaching to come up with redirecting data to the remote user through modem instead of redirecting data to specific communication interface (i.e. UART). The motivation for doing so would be so that the data can be stored remotely to have a back-up system and also security reasons (column 11 lines 43-45).

Office Action, page 16-18.

Omitted Features of claims 1, 9, and 13

Independent claim 1 recites a virtual communication device (VCD) interface adapted to intercept data received from an operating system (OS) and “to redirect *without arbitration* the data received from the OS to the remote user.” (Emphasis added). Similarly, independent

claims 9 and 13 recite a VCD adapted to “redirect *without arbitration* the formatted data to the external communication interface.” (Emphasis added).

As noted by the Examiner, the Krontz reference fails to teach a system that includes data redirect *without arbitration*. However, the Krontz reference not only fails to teach a system that includes data redirect *without arbitration*, but rather the Krontz reference *requires* data redirection *with* arbitration. The Krontz reference discloses an *arbitrator 220* which supervises the sharing of the modem so that “applications executing in the operating system mode is prevented from interfering with the remote console’s exclusive use of the modem.” Krontz, col. 10, lines 34-44. As further disclosed by the Krontz reference, “the SMI handler for the virtual communication port 200 acts as an *arbitrator* to decide when access to the virtual communication port 200 should be forwarded to the UART device 145.” Krontz, col. 10, lines 51-54; *See also* Fig. 2. (Emphasis added). That is, before data can be redirected to the external communication interface 145 from the virtual communication port 200, the arbitrator 220 decides on allocating these devices among various computer applications requesting access to these resources. Further, a series of conditions provided by the arbitrator 220 may determine when the external communication interface 145 may access the virtual communication port 200. Krontz, col. 11, lines 52-65.

Thus, because the technique disclosed by the Krontz reference is aimed at sharing a resource among multiple computer applications, employing an arbitrator for allocating access to the virtual communication port 200 and forwarding such an access to the external communication port 145 is necessary. In other words, without employing such arbitration means, the system disclosed by the Krontz reference would not be functional. As such, the

Krontz teaches away from a combination with a secondary reference to show the claimed redirection of data “*without arbitration...* from the OS to the remote user,” as recited by independent claim 1. Similarly, the Krontz reference teaches away from a combination with a secondary reference to show the claimed VCD adapted to “redirect *without arbitration* the formatted data to the external communication interface,” as recited by independent claims 9 and 13 specifically because the problem solved by the Krontz reference, sharing a resource among competing devices, *requires* some form of arbitration to determine which device gets access to the resource.

However, despite the fact the Krontz reference itself teaches away from a combination with a secondary reference to show *redirection without arbitration* the data received from the OS to the remote user and *redirection without arbitration* the formatted data to the external communication interface as recited in independent claims 1, 9, and 13, the Examiner applied the Ito reference to show the above referenced recitations. However, as shown above, the Ito reference fails to teach or suggest *redirecting* without arbitration the formatted data to the external communication, instead disclosing, at best, transmission of data to either a remote or a local computer based on the *mode of operation* of the operating system. Because the transmission of data described in the Ito reference is described as based on the *mode of operation* of the operating system, *redirecting* of that data is not taught, since redirection requires that the destination of the data must be changed. Since the teachings of the ITO reference specifically describe transmitting data along a path *prescribed* by the OS, it can hardly be argued that the data transmission system described by the Ito *redirects* the transmitted data. Furthermore, as noted by the Examiner, the Krontz reference is silent as to the above claim recitation.


Accordingly, none of the cited references, taken alone or in hypothetical combination disclose all of the features of independent claims 1, 9, and 13. Applicants therefore assert that claims 1, 9, and 13, as well as all claims depending thereon, are allowable. Therefore, Applicants respectfully request withdrawal of the rejection of claims 1-9 and 13-23, and request that the same be passed to issue.

Conclusion

In view of the remarks and amendments set forth above, Applicants respectfully request allowance of the pending claims. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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